

EDITORIAL

Music Interventions as a Complementary Form of Treatment in ICU Patients

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ABBREVIATIONS

ICU = intensive care unit

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In the current issue of *Hospital Chronicles* Mangoulia and Ouzounidou present a review article on the role of music to promote relaxation in intensive care unit (ICU) patients.¹ The authors provided reliable scientific evidence that music intervention may be an effective method for anxiety reduction associated with heart rate and arterial pressure reduction in ICU patients. In addition, music listening may also affect respiration rate or positively modify levels of stress-related neurohormones.

Music intervention is widely accepted as a complementary modern therapeutic tool in various medical settings. In both music medicine as well as receptive music therapy interventions, the nature of the music stimulus is assumed to be of great importance in influencing therapeutic outcomes. However, there is only limited foundational research available on this topic and it appears that the selection of music materials for therapeutic purposes is currently more of an art than a science. The lack of collaboration among researchers is likely a factor contributing to this reality, as there is little similarity in the musical selections used from study to study. Moreover, in far too many studies, researchers fail to mention the type of music used in the intervention. Therefore, it is difficult to replicate music interventions from study to study, and there is no identifiable repertoire of music selections in various styles that has been tested repeatedly for therapeutic benefits. In addition, patient preference appears to be an important factor in selecting music for a therapeutic intervention.^{2,3}

Thus, an important goal is the execution of prospective research that identifies if and how there is a relationship between specific, salient musical elements (rhythm, harmony, melody, timbre, tempo) and health benefits. Obviously this research is complex, as it is indeed difficult to separate out the influence of specific music elements and their effects versus the music gestalt. Likewise, it is extremely difficult to make generalizations about both the elements of music and music gestalt across patients with varying medical conditions, ages and cultural backgrounds. However, it would be important to know, for example, if rhythm and tempo are important musical components for influencing heart rate in cardiac patients, if music lacking harmonic tension is effective in reducing heart rate, if meter can influence breathing patterns. Beyond an examination of these elements, it is also considered essential to investigate if and how music instrumentation influences the listener. For example, are certain instrumentations more effective in inducing relaxed states in the listener, and conversely, are certain instruments contraindicated for this purpose? It is also important to examine the effects of instrumental versus vocal music for a variety of therapeutic intents. For example, from a clinical perspective, music therapists are aware that the use of vocal music (possibly via lyrics) often elicits strong and stressful emotional reactions in the listener. If this is the case, how might vocal music distract from pain or facilitate anxi-

ety reduction, for example?⁴

In addition, a patient's familiarity with music often interacts with music preference. For example, it is obvious that it may be contradictory to "prefer" music or musical styles that one has not yet heard. Therefore, it is important for researchers to assess familiarity with the music used prior to any study. Doing this will also provide a necessary ethical safeguard and reduce risks to subjects, i.e., in determining if the music used in the study elicits strong memories and emotional reactions in the subject prior to implementation.

In implementing music therapy within medical specializations, patients are often physically and emotionally fragile due to illness or medical procedures (i.e., ICU patients). For this reason, receptive music therapy experiences that do not require active participation of the patient are often the only available options for treatment. However, for patients whose condition is not so much compromised, a broader range of music therapy interventions are available via a trained professional music therapist (improvisation, song-writing, singing etc). Although these interventions are widely used in clinical music therapy, they are not sufficiently represented in the medical music therapy research literature, and it is considered essential to investigate their effectiveness, as this is necessary for evidence-based practice. Lastly, aside from the pioneering study of Bailey (1983), there has been little research that compares the effects of live versus pre-recorded music on various health outcomes.⁵

Moderate mean effect sizes were found for state anxiety reductions, as measured by the State-Trait Anxiety Inventory (STAI) in surgical and in cardiology/ICU patients; however, these results were inconsistent across studies. This inconsistency was attributable to varying levels of randomization; the use of more rigorously controlled designs yielded significantly lower effects than less rigorous designs. More consistent results were obtained in studies measuring anxiety with tools other than STAI (e.g., Visual Analogue Scale).^{6,7}

The time is approaching for clinicians and researchers to begin studying the effects of music therapy or music medicine

on the larger and more critical current health issues. If successful, these studies will undoubtedly revolutionize the disciplines and ensure their inclusion as necessary modalities within health care. Future research agenda should include some possible hot topics like the following: Does music therapy influence survival from an illness and how? Does music therapy significantly influence medical patients' quality of life? Can music therapy be used as primary, as opposed to complementary, treatment for some medical conditions (e.g., pain)? Do music therapy or music medicine significantly reduce costs associated with medical care?^{6,8}

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